

## REMARKS

### Status of the Claims

Claims 24-43 and 48-57 are now present in this application. Claims 24, 31, 33, 36, 39, 41, 43, 48 and 53 are independent.

By this amendment, claims 44-47 have been canceled without prejudice, and claims 52-57 have been added. No new matter has been added by way of this amendment.

Reconsideration of this application, as amended, is respectfully requested.

### Obviousness-Type Double Patenting Rejection

Claims 44-51 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-9 of U.S. Application No. 12/152,016. This rejection is respectfully traversed.

Initially, Applicants note that this rejection is moot with respect to claims 44-47, which have been canceled without prejudice.

The factual inquiries set forth in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966) that should be applied to establish a background for determining obviousness-type double patenting analysis are missing from the Office Action with respect to independent claim 48.

Because the rejection is based on 35 U.S.C. § 103, what is in issue in such a rejection is "the invention as a whole," not just a small part of the preamble of the claimed invention. Under 35 U.S.C. § 103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

Moreover, as pointed out in MPEP 804, because the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. § 103(a) rejection, the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103 are employed when making an obvious-type double patenting analysis.

These factual inquiries are summarized as follows: (A) Determine the scope and content of a patent claim and the prior art relative to a claim in the application at issue; (B) Determine

the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue; (C) Determine the level of ordinary skill in the pertinent art; and (D) Evaluate any objective indicia of non-obviousness. The conclusion of obviousness-type double patenting is made in light of these factual determinations.

Any obviousness-type double patenting rejection should make clear: (A) the differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and (B) the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.

Furthermore, a rejection must be based on objective factual evidence rather than mere conclusory statements by an Examiner. See, *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). Absolutely no objective factual evidence is presented in support of this speculative conclusion of obviousness. Instead, the rejection is phrased in terms of anticipation rather than obviousness in that the rejection is based on overlapping ranges.

Applicants respectfully submit that a *prima facie* case of double patenting has not been established because the Office Action fails to even discuss (1) the nitride semiconductor feature of independent claim 48, and the specific dopant elements recited in claim 48, and the single crystal phosphor characteristic recited in independent claim 48; or (2) where these positively recited features of the claims under rejection are found in claims 5-9 of Serial No. 12/520,016, which has now matured into U.S. Patent 7,855,385, or (3) point out all of the differences between each and every one of claims 48-51 of this application and claims 5-9 of U.S. Patent 7,855,385, i.e., not just dopant concentration features..

Moreover, the rejection is not stated in terms of the claims, but in terms of the “level of dopant concentration in each application.” In view of this statement, it appears that this rejection is improperly based on the entire application, not just the claims, whereas a proper basis for a double patenting rejection must be based on only the claims. Moreover, as noted above, this rejection is improperly based on fewer than all of the features positively recited in claims 48-51 of this application, and improperly fails to demonstrate why the unspecified differences between claims 48-51 of this application and claims 5-9 of U.S. Patent Application 7,855,385 are obvious variations of claims 5-9 of U.S. Patent 7,855,385.

In other words, Applicants respectfully submit that whether or not the claims of these copending applications do recite some features in common, this rejection fails to compare each and every feature of Applicants' claimed invention with each and every feature of U.S. Patent 7,855,385's claims 5-9, or to state what all of the differences are therebetween, or to address the obviousness or non-obviousness of the differences, as required by *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).

Moreover, no objective factual evidence is presented to establish that proper motivation by one of ordinary skill in the art exists to modify claims 5-9 of the U.S. Patent 7,855,385 to arrive at the invention recited in Applicants' claims 48-51. In fact, the issue of proper motivation is not even discussed. Instead the rejection merely concludes what is needed to do to arrive at the claimed invention (only in terms of choosing among overlapping ranges) and overlooks meeting the Office's burden of providing objective factual evidence of proper motivation to perform the choosing.

Additionally, in order to be considered fully responsive to the outstanding Office Action, Applicants respectfully present the following reasons why claims 48-51 patentably distinguish over claims 5-9 of Serial No. 12/152,016 (now U.S. Patent 7,855,355).

Firstly, independent claim 48 recites a combination of features including a SiC substrate. However, claims 5-9 of Serial No. 12/152,016 (now, U.S. Patent 7,855,355) clearly do not recite a SiC substrate. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Secondly, independent claim 48 recites a combination of features, including a 6H-SiC single crystalline phosphor. However, claims 5-9 of Serial No. 12/152,016 (now, U.S. Patent 7,855,355) clearly do not recite either a 6H-SiC phosphor or a single crystalline phosphor. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Thirdly, independent claim 48 recites a combination of features, including a light emitting nitride semiconductor device, whereas none of claims 5-9 of Serial No. 12/152,016 (now U.S. Patent 7,855,355) recite such a feature. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Furthermore, the Advisory Action, dated March 16, 2011, although not part of the final office action, indicates that claim 5 of Kamiyama (now U. S. Patent 7,855,385) taken with claims 2 and 3 of Kamiyama clearly make obvious the claims where both acceptor and donor impurities are defined as the same species and concentrations as instantly claimed. However, this conclusion is improper because it overlooks the fact that not one of Kamiyama's claims 2, 3 or 5-9 recites a 6H-SiC phosphor, or a single crystal phosphor, or a substrate of SiC, or a nitride semiconductor light emitting device.

The Advisory Action also indicates that the semiconductor device would be understood to be a nitride emission layer as this is the only possibility taught by the copending application (Kamiyama). However, the specification of Kamiyama cannot be used to add subject matter to the claims. This double patenting rejection is limited to the claimed invention and the claimed invention of Kamiyama clearly does not recite a nitride emission layer. Limitations not found in the claims cannot be read into them. In this regard, Applicants refer to a decision by the USPTO Board of Patent Appeals and Interferences in Appeal 2009-009202 (available from the USPTO's e-Foia web page) in which the Board, in deciding a non-statutory obviousness type double patenting rejection clearly stated on page 14 of the decision, that the claims must be construed broadly and reasonably. Unfortunately, the Advisory Action makes it clear that the final rejection goes much farther than this and actually reads limitations not found in the claims into those claims. This is improper. It is clear that limitations from the specification that are not found in the claims cannot be read into the claims. Another way of saying this is that reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is quite a different thing from reading limitations of the specification into a claim, to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim. This is impermissible importation of subject matter from the specification into the claim. See MPEP § 2111.

The Advisory Action also speculates that if Kamiyama's semiconductor device were not a nitride, then the light emission layer of the prior art application would encompass the nitride emission layer of the present application. Applicants do not understand what this statement has to do with a non-statutory obviousness type double patenting rejection because what is in issue is the claimed invention of Kamiyama, which does not recite any wavelength ranges whatsoever.

Accordingly, the Office Action fails to make out a *prima facie* case of non-statutory obviousness-type double patenting.

Thus, reconsideration and withdrawal of this rejection of claims 44-51 are respectfully requested.

### **New Claims**

Claims 52-57 have been added for the Examiner's consideration.

Claim 52 recites a light-emitting apparatus according to claim 48, wherein the said 6H-SiC single-crystalline phosphor having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm.

Claim 53 recites a light-emitting apparatus having a first SiC layer doped with A1 and N on a substrate of SiC and a second SiC layer doped with B and N of the first SiC layer for a semiconductor and comprising a light-emitting device of a nitride semiconductor on said 6H-SiC single-crystalline phosphor layer(s).

Claim 54 recites the light-emitting apparatus according to claim 53, wherein the emission wavelength of said light-emitting device of a nitride semiconductor is not more than 408 nm.

Claim 55 recites the light-emitting apparatus according to claim 53, wherein both of the doping concentration with at least one of B and A1 and the doping concentration with N in said 6H-SiC single-crystalline phosphor are  $10^{16}/\text{cm}^3$  to  $10^{19}/\text{cm}^3$ .

Claim 56 recites the light-emitting apparatus according to claim 53, wherein both of the doping concentration with at least one of B and A1 and the doping concentration with N in said 6H-SiC single-crystalline phosphor are  $10^{17}/\text{cm}^3$  to  $10^{19}/\text{cm}^3$ .

Claim 57 recites a light-emitting apparatus according to claim 53, wherein the said 6H-SiC single-crystalline phosphor having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm.

Firstly, independent claim 57 recites a combination of features including a SiC substrate. However, claims 5-9 of Serial No. 12/152,016 (now, U.S. Patent 7,855,355) clearly do not recite a SiC substrate. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Secondly, independent claim 57 recites a combination of features, including a 6H-SiC single crystalline phosphor. However, claims 5-9 of Serial No. 12/152,016 (now, U.S. Patent 7,855,355) clearly do not recite either a 6H-SiC phosphor or a single crystalline phosphor. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Thirdly, independent claim 57 recites a combination of features, including a light emitting nitride semiconductor device, whereas none of claims 5-9 of Serial No. 12/152,016 (now U.S. Patent 7,855,355) recite such a feature. Nor is any objective evidence presented of such a combination of features, or of why such features are obvious.

Additionally, as pointed out above, no objective factual evidence is presented to establish that proper motivation by one of ordinary skill in the art exists to modify claims 5-9 of U.S. Application No. 12/152,016 (now U.S. Patent 7,855,385) to arrive at the invention recited in Applicants' claims 48-51. In fact, the issue of proper motivation is not even discussed. Instead the rejection merely concludes what is needed to do to arrive at the claimed invention (only in terms of choosing among overlapping ranges) and overlooks meeting the Office's burden of providing objective factual evidence of proper motivation to perform the choosing.

Accordingly, Applicants respectfully submits that claim 53, and dependent claims 54-57 (each of which depends from claim 53) patentably define over claims 5-9 of U.S. Patent 7,855,385,

With respect to new claim 52, claim 52 depends from claim 48, which is patentable at least for reasons presented above, and so is claim 52, for that reason.

Thus, consideration and allowance of claims 52-57 are respectfully requested.

**Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert J. Webster, Registration No. 46472, at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

By \_\_\_\_\_

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